

Wednesday, January 21st, 2015

LSC 3 - Life Sciences Centre

2350 Health Sciences Mall

**12-1pm**



## Dr. Owen McCarty

*Associate Professor, Biomedical Engineering  
Oregon Health & Science University*

### **“Platelet cytoskeletal remodelling and thrombosis”**

The Rho family of GTP binding proteins, also commonly referred to as the Rho GTPases, are master regulators of the platelet cytoskeleton and platelet function. These low-molecular-weight or ‘small’ GTPases act as signaling switches in the spatial and temporal transduction, and amplification of signals from platelet cell surface receptors to the intracellular signaling pathways that drive platelet function. The Rho GTPase family members RhoA, Cdc42 and Rac1 have emerged as key regulators in the dynamics of the actin cytoskeleton in platelets and play key roles in platelet aggregation, secretion, spreading and thrombus formation. The focus of this talk will be to we provide an overview of Rho GTPase signaling in platelet physiology, and highlight some of his group’s recent efforts to characterize the role that cytoskeletal modeling plays in regulating platelet function and occlusive thrombus formation under shear.